

CLINICAL RECORDS

white ovoid encapsulated node, $14 \times 10 \times 6$ millimetres. The cut surface was homogeneous, firm and white. Section showed a fibrous granuloma with focal chronic inflammatory infiltration, tending to concentrate round blood vessels which showed endarteritis. Some necrosis was present but caseation or well formed giant cells were not seen.

Treatment with iodides by mouth and bismuth oxychloride injections was commenced on 2nd May 1944. By 13th June 1944, after 1.45 grammes of bismuth, all the nodules had disappeared and only a slight thickening of one or two small areas of the subcutaneous tissues could be felt over the lower insertion of the triceps.

Comment

Subcutaneous fibroid syphilomata have been described in the British literature by Parkes Weber, by Worster-Drought, by Lane and by Wakeley. The condition is mentioned by Stokes and was the subject of articles by Kalz and Newton, by Goodman and Young and by Wangenstein. Wakeley thought that subcutaneous fibroid syphilomata should be distinguished from juxta-articular nodules, which Davey considered to be a late manifestation of yaws, but study of later reports suggests that the disease process is similar and that the two terms are largely synonymous. It has been suggested that these nodules might be confused with subcutaneous nodules of rheumatic origin, but we feel that the differentiation should not present difficulty. The triceps is a favourite site for localized gumma of muscle, a condition which one of us has described elsewhere (Laird), but such tumours are less freely movable than are subcutaneous fibroid syphilomata.

The three essentials of accurate diagnosis are the presence of other evidence of syphilis, characteristic findings on histological examination of the lesion and an adequate response to antisyphilitic treatment. The case herewith reported satisfies these diagnostic criteria and is of especial interest in virtue of the asymmetrical distribution of the syphilomata, the probable association with trauma and the very rapid and complete resolution of the nodules during therapy with iodides and bismuth.

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DIAGNOSIS OF SYPHILIS AFTER PENICILLIN TREATMENT FOR GONORRHOEA

In the report of Suchet's paper in the December number of the *Journal*, the risk of masking syphilis by treating with penicillin a concurrent infection of gonorrhoea is discussed. This danger appears to be very real and consequently the case reported on below is of interest.

An Indian soldier aged 24 years was admitted to this hospital ship from a troopship with the diagnosis of gonorrhoea. He was suffering also from acute conjunctivitis of the left eye and right inguinal adenitis. He gave a history of exposure to infection, on one occasion only, 14 days before admission; there was no previous history of venereal disease. In the troopship gonococcal urethritis had been diagnosed microscopically and he had been treated with 25 grammes of sulphathiazole. The conjunctivitis had responded well to protargol and hot bathing.

On admission to hospital the patient had a temperature of 103°F , and a pulse rate of 86. There was a resolving left conjunctivitis but no discharge; the right eye was normal. The right inguinal glands were enlarged and very tender. In the left groin there were a few hard painless glands. There was some balanitis. The foreskin was long and not fully retractable, and at its edge there were two small dirty superficial irregular ulcers; in association with the

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adenitis these were regarded clinically as soft sores (chancroid). Many gonococci being found in the copious urethral discharge, he was given the routine course of penicillin (5 doses of 20,000 units at 3-hourly intervals).

On the second morning his condition was much improved; there were no gonococci in the slight watery discharge, the adenitis was resolving and the conjunctivitis had almost cleared. The Ito-Reenstierna skin test gave a definitely positive result. The case was considered to be a mixed infection of gonorrhoea and chancroid—a combination common in Southern Asia. Later in the day, however, masses of *Treponema pallidum* were found on dark-ground examination. The Kahn test was negative. After confirmation that *Tr. pallidum* was present, the routine anti-syphilitic course of penicillin was given (2 million units in 10½ days). At the end of this course the urethritis, balanitis, adenitis, conjunctivitis and sores had all resolved, and the Kahn test remained negative.

The object of this communication is not to draw any conclusions but just to record an interesting case, and one in which spirochaetes were still found in the local lesions 24 hours after the administration of 100,000 units of penicillin for a concurrent gonococcal infection.

It may be irrelevant, but is nevertheless interesting, to record that this patient contracted a common cold half way through his course of 2 million units of penicillin.

I am indebted to Surg. Capt. E. B. Pollard, R.N., for permission to record this case.

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REVIEWS OF BOOKS

Serology in Syphilis Control: Principles of Sensitivity and Specificity. By R. L. Kahn, M.S., D.Sc. 206 pp. The Williams and Wilkins Company, Baltimore, and Baillière, Tindall and Cox, London, 1942. Price \$3'00 or 16s. 6d.

This book is essentially an attempt—and a highly successful one at that—to explain what is meant by sensitivity and specificity, to stress that these are the two fundamentals of serum testing and to show how serology can and should be applied to syphilis control in the general civil population, in the Forces and in industry.

Syphilis control requires a long-term programme and the same requirement applies to serology employed for that purpose. The term, sensitivity, should be limited to cases of syphilis. "Specific sensitivity" is the capacity of a given test to detect antibody in syphilitic sera, whereas "diagnostic sensitivity" is the sensitivity of a test which makes it worthy of the name, serodiagnostic. Specificity is the capacity of a test to give the minimum of positive reactions in non-syphilitic cases. Dr. Kahn is at great pains to make it clear that a very small difference in the percentage of false positives between two tests may represent a relatively large difference in the actual number of false positives, whereas, on the other hand, a relatively large difference in the sensitivity of two tests may represent a comparatively small difference in the actual number of true positives.

By various means the sensitivity of a given test may be increased until the test gives positive reactions with the sera of all persons, syphilitic and non-syphilitic; that is to say, nearly every serum contains a "biological" antibody which will react with the antigen used in serum tests for syphilis if the conditions are made favourable. It is quite clear therefore that it is impossible to attain 100 per cent sensitivity; situations arise in syphilis which cause serum tests to be negative and it appears that 70-80 per cent sensitivity is about the optimum attainable at present; in any case the only safe guide to sensitivity is specificity, which should attain a percentage of at least 99.9.

The history of the origin and development of complement fixation and precipitation tests, with an account of how this sensitivity has been brought up to present-day standards, leads on naturally to the practical aspects of establishing the sensitivity of a test. "Diagnostic sensitivity" is defined as optimal sensitivity combined with maximal specificity. Experience over a considerable period has shown the Kahn test to be a very reliable one; its sensitivity may be increased, as in the presumptive test, and this test is of value as a laboratory check on the standard test, as a screen test in the examination of blood donors and in certain cases of treated syphilis; it is claimed also to be a useful aid to diagnosis in special cases in which repeated exposures to venereal infection are known to take place. (Not everyone would agree with this last; surely a positive presumptive Kahn reaction in such a case would have no more value than a \pm standard one.)

Chapter IX is devoted to an analysis of the results reported on at three serum conferences, from which it is clear that the sensitiveness of different tests varies a good deal. Multiple tests are considered to be of questionable value; undoubtedly they increase sensitivity but at the expense of specificity. In any case all tests depend upon the same principle—the detection of antibody—and this latter substance may be present not only in certain pathological conditions but even in normal persons. Spirochaetal antigens have not so far proved to be very successful and it appears that we must wait for improved cultural technique before they are likely to become altogether satisfactory.